2 Background Information

This chapter is a compilation of applicable excerpts of reviewed documents pertaining to this bikeway master plan. Documents include the City of Chula Vista's 1989 General Plan and 1996 Bikeway Master Plan, as well as regional and state bikeway references.

2.1 City of Chula Vista General Plan

The *City of Chula Vista General Plan* (adopted July 1989, revised September 1995**)** was reviewed for references to bikeway facilities and related policies. Certain elements such as land use, parks and recreation, and circulation were particularly scrutinized since policy statements relating to bikeways and multi-modal connections often occur in these elements. The *General Plan* is currently undergoing update and additional goals and objectives may be identified in the update process. The following sections considered relevant to this bikeway master plan update were compiled from the *General Plan*:

Page 0-1: The Vision
The following are "major components" of the vision for Chula Vista:

Chula Vista Greenbelt
"The physical features which define the general plan area of the City provide a unique opportunity to develop a magnificent network of open space, trails and recreational activities. The backbone of this system will be the Chula Vista Greenbelt, connecting the Bayfront, Sweetwater and Otay Valleys, and the Upper and Lower Reservoirs. The Greenbelt represents a continuous open space which visually and functionally links all the communities and the principle parks and recreational resources of the City."

Though a greenbelt plan is the focus of separate study being conducted by the City of Chula Vista and the County of San Diego, it is important to this bikeway master plan for several reasons. One is that many of the connections to adjacent jurisdictions' bicycle facilities may occur via the proposed greenbelt corridors to the benefit of recreational and commuting cyclists. A second reason is that the greenbelt will become a significant recreational resource that will very likely be regularly accessed by the citizens of Chula Vista using their bicycles. Thirdly, even though the greenbelt is conceived as a recreational asset, some commuting cyclists will appreciate the gentle grades and lack of motor vehicles of the river valleys.

Page 0-2: The Vision (continued)
Eastern Urban Center and University Site
"An urban center in the eastern portion of the City is envisioned to be developed in the future. This will serve as a regional retail and business center for the eastern area of the City. It will also be a major center along State Route 125 which will ultimately become the

third north/south freeway in the South Bay and connect Chula Vista with Otay Mesa and the second border crossing to the south, and the remainder of the San Diego metropolitan area to the north."

Though the establishment of a university is not yet a certainty, access to the campus via bicycle should be considered because of the number of students who are likely to be bicycle commuters.

Page 0-3: The Vision (continued)
Transportation
"Directly related to this regional system is an east/west express bus route connecting the urban core with the eastern urban center. The east/west express public transit is seen as a key to the integration of the western and eastern areas of the City. The express bus route includes, among its limited stops, the majority of the community activity centers in the City.

This appears to be referring to the Bus Rapid Transit (BRT) system under study for the South Bay and other areas of metropolitan San Diego. It is conceived as a lower cost, more flexible alternative to fixed rail that would be faster than standard buses because of limited stops and other infrastructure improvements. In any case, the consultant will monitor the progress of the BRT system and whether it will allow bicycles on board. Even if it does not, the provision of bicycle parking at some stops may be desirable to help generate ridership.

2.1.1 Land Use Element

Land use has a direct impact on bikeway facility planning because, more than any other variable, land use patterns affect facility use and demand. Specifically, land use types and densities tend to generate corresponding levels of bicycle use. For this reason, land use is closely evaluated in bikeway system planning.

Page 1-9: Land Use Element Chapter 3 - Goals and Objectives
Goal 4: Higher Education and Cultural Activities, Objective 18.
"Promote, through the designation of a candidate site and discussions with the State of California, the establishment of a four-year college or university in the Eastern Territories."

See the previous note under Page 0-2: The Vision, Eastern Urban Center and University Site.

Page 1-10: Land Use Element Chapter 3 - Goals and Objectives
Goal 5: Open Space, Recreation and Visual Quality, Objective 20.
"Plan and implement a continuous greenbelt, open space and trail system around the City. The system should begin at the Chula Vista Bayfront, extend along Otay Valley to the Lower Otay Reservoir, extend north in two corridors – Salt Creek Canyon and the Lower and Upper Otay Reservoirs, connect to the Sweetwater Valley via Wild Mans Canyon and extend along the Sweetwater Valley to the Chula Vista Bayfront."

See the note above under Page 0-1: The Vision, Chula Vista Greenbelt.

Page 1-39: Land Use Element Chapter 7 - Community and Urban Design
Urban Design, Eastern Urban Center and Community Activity Centers
Community Activity Centers
" Community Activity Centers are subcenters of the general plan area that provide a variety of community support facilities and services. They are not exclusively community retail centers and may include higher density residential, employment, health care, recreation and other public and private services.

The seven Community Activity Centers in the Chula Vista General Plan Area are as follows:

• Montgomery. The area in the vicinity of the intersection of Third Avenue and Oxford Street.

• Bonita. The area along Bonita Road between Sweetwater Road and Otay Lakes Road.

• Terra Nova. The area of East H Street east of I-805.

• Community Hospital. The area around the Chula Vista Community Hospital.

• Southwestern College. The area in the vicinity of the intersection of East H Street and Otay Lakes Road.

• EastLake. The EastLake Village Center and commercial office area in the vicinity of Otay Lakes Road east of Route 125.

• Olympic Training Center. The OTC site and adjacent mixed use areas south of Olympic Parkway, near Lower Otay Reservoir."

These activity centers will become localized hubs providing a wealth of desirable day-to-day products and services. If so, they will generate a significant number of short distance trips by local residents. Automobile dependence can be reduced, especially for such short-range errands, by encouraging bicycle use by providing convenient bicycle access and parking. This will also reduce automobile parking demand.

Page 1-42: Land Use Element Chapter 7 - Community and Urban Design
Greenbelt, Open Space and Trail System
Chula Vista Greenbelt
"The developed parks in the greenbelt are linked by a hiking and bicycle trail system that forms a continuous loop around the City. To assure continuous access for maintenance and security patrols, this trail is envisioned as the equivalent of a one lane paved road, approximately eleven feet wide, with a structural design to allow maintenance vehicles to use the trail."

Caltrans mandates minimum standards for bikeways and Class 1 bike path width requirements would be fulfilled by the standard proposed for the greenbelt trail, as long as two feet of clear space was provided on either side. Also, if portions of this trail can be shown to have a bicycle commuter benefit, Caltrans–administered construction funding is much more likely to be available. This may become a significant factor considering the relatively high cost of trails designed to Class 1 bikeway facility standards.

Page 1-47: Land Use Element Chapter 7 - Community and Urban Design
7.3 Greenbelt, Open Space and Trail Network
Open Space and Trail Network
"The Chula Vista Greenbelt is the most dominant feature of an open space network that, with secondary elements, extends the greenbelt in to the urbanized area and connects community and neighborhood open space to the greenbelt. These secondary open space corridors also provide trails permitting non-vehicular travel across much of the City through open space, parks and along low volume vehicular streets.

In addition to the Greenbelt, the principal elements of the open space and non-vehicular circulation network are as follows:

1. F Street Gateway
"F Street is the only major street in the urban core that extends a view to the bay into the City. San Diego Bay can be seen from Third Avenue along F Street. This gateway is seen as the major non-vehicular connection east/west through the urban core connecting the

bayfront on the west to the Third Avenue retail area on the east. It is also a greenspace corridor with substantial setbacks for new development and a consistent landscape theme emphasizing its linear, connecting character through the urban core… Additional facilities that are planned or may occur in the future and would contribute further to the establishment of F Street as a major concourse for Chula Vista are as follows:

• Pedestrian and bicycle facilities"

Since bicycle facilities are proposed, "non-vehicular" probably actually means "non-motorized," (i.e. pedestrian or bicycle). Like the "Community Activity Centers" noted previously, a "car-free" shopping and entertainment zone would be attractive to residents in general as a destination point, but probably more so for those wanting to use bicycles for transportation.

Page 1-54: Land Use Element Chapter 7 - Community and Urban Design

7.3 Greenbelt, Open Space and Trail Network

"19. Proctor Valley
The Proctor Valley open space is the pedestrian/bicycle and landscaping connection between the community of Central Proctor Valley and the Greenbelt link along Upper Otay Reservoir. This open space link is traversed by open space corridors connecting the San Miguel and Jamul Mountains."

As mentioned earlier, the Greenbelt will provide connections to other jurisdictions, and this is one case where the General Plan makes a specific recommendation. In this case, the recommendation is to take advantage of the opportunity to make connections to existing high quality open space corridors.

Page 1-64: Land Use Element Chapter 8 - Scenic Highways and Roads

"Increased environmental awareness on the part of the public has led to a concern for developing highways which serve not only for transportation, but also preserve attractive natural and man-made amenities for the enjoyment of both motorists and other users and viewers."

Wherever possible, bicycle facilities should also be sited to take advantage of scenic roadway opportunities. Since the majority of bicycle facilities are part of typical motor vehicle roadways, cyclists will benefit wherever scenic roadway status is conferred. Since cyclists travel at lower speeds and can stop more readily than motorists, they doubly benefit from scenic opportunities.

2.1.2 Circulation Element

A Circulation Element is required by state law (Government Code Section 65032(b)) and must consist of "the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other public utilities and facilities, all correlated with the Land Use Element of the General Plan." The Circulation Element must state the overall goals, objectives and policies concerning the circulation needs of the City and specifically address issues relating to major thoroughfares, transportation routes, terminals and other local public utilities and facilities. The City of Chula Vista's Circulation Element also addresses issues of public transit, bicycle and pedestrian facilities, railroads and light rail transit, parking, transportation demand management, and vehicular and pedestrian safety.

The City of Chula Vista's Circulation Element is most closely related to, and is a reflection of, the Land Use Element of the General Plan. The Circulation Element was developed in conjunction with traffic modeling and analysis utilizing the projected land uses contained

in Chula Vista's Land Use Element, as well as the land use plans of surrounding communities.

Page 2-11: Circulation Element Chapter 3 - Goals and Objectives

3.1 Circulation Plan

Goal 4: Reduce Traffic Congestion

"In the future, the City of Chula Vista will need to address traffic congestion associated with increased vehicle travel as a result of population growth. In addition to providing adequate roadway capacity to handle future traffic growth, it is the City's goal to encourage the use of alternative modes of travel. The City will strive to provide convenient and efficient alternatives to the automobile to reduce the impact of growth on the circulation system.

Objective 23. Provide bicycle support facilities at all major bicycle usage locations.

Goal 5: Transportation Phasing

The adequacy of the transportation system to support land development and redevelopment is a critical element in the planning and implementation of the circulation system. In keeping with the growth of population and employment within the region, it is the goal of the City to implement a transportation facility phasing capital improvement program, based on anticipated land development traffic impacts.

Objective 27. Promote the development of well planned communities which tend to be self supportive and thus reduce the length of the vehicular trip, reduce the dependency on the automobile and encourage the use of other modes of travel."

The preceding excerpts from the *General Plan* support the concept of reducing traffic congestion by providing and encouraging alternative travel modes, including the use of bicycles.

Page 2-12: Circulation Element Chapter 3 - Goals and Objectives

3.2 Bicycle Plan

"Goal 1: Provide Improved Bicycle Facilities

Due to the increasing interest in the use of bicycles as an alternative mode of transportation and as a source of recreational enjoyment, the City of Chula Vista is committed to implementing a well planned bicycle network. In response to this need, the following objectives have been developed.

Objective 1. Link major residential areas with principal trip destinations such as schools, parks, community centers and shopping centers.

Objective 2. Provide linkages between bicycle facilities which utilize circulation element alignments and open space corridors.

Objective 3. In addition to using open space corridors, off-street bicycle trails should use flood control and utility easements. The trails shall be designed to minimize interaction with automobile cross traffic.

Objective 4. Preserve, restore or provide the opportunity for a cyclist to ride a bicycle to virtually any destination, to make the bicycle a viable transportation alternative.

Objective 5. Provide a system of bicycle routes affording the cyclist the maximum possible safety.

Objective 6. Provide related facilities and services necessary to permit the bicycle to assume a significant role as a form of local transportation and recreation.

Objective 7. Foster the development of a system of interconnecting bicycle routes throughout the county and region.

Objective 8. Require new development projects to provide internal bikeway systems with connections to the city-wide bicycle network.

Objective 9. Develop and monitor demonstration programs as a part of new development projects to advance the use of bicycles.

Objective 10. Create a comprehensive public information program to increase public awareness of bicycle facilities and safety."

These bicycle plan objectives correlate with many of the other previous excerpts from the *General Plan*. The emphasis appears to be on making bicycles a viable form of transportation and providing linkages wherever possible to promote bikeway connectivity throughout the City.

Page 2-30: Circulation Element Chapter 7 - Bicycle Plan

"Bicycle use for both recreation and transportation has increased significantly in recent years in Chula Vista and the surrounding region. There has been steady growth in bicycle use for reason such as physical fitness, recreation, concern about rising fuel costs and environmental protection. These interests have resulted in increased public demand for bikeways and routes where bicycles can be ridden with ease and relative safety.

The degree of community support for more and improved bike trails was demonstrated in a 1983 Bike Route Facilities Report which included a city-wide public opinion survey. A majority of the people surveyed said they would ride bicycles more often if better or additional bicycle facilities existed in the City."

This excerpt corresponds to what the consultants have found in to be true in most cities when residents have been surveyed concerning desired public improvements.

Page 2-36: Circulation Element Chapter 8 - Public Transit Plan

8.3 Proposed Public Transit Plan

8.3.5 Open Space and Trail System

"The Open Space and Trail Network will be designed to provide direct access to the major stops of the local bus network, the east/west express bus route and the north/south regional transit system, thus integrating the non-vehicular mode of transportation system, such as pedestrians and bicyclists, with the mass transit and vehicular modes of transportation."

This excerpt clearly indicates the desire for maximum connectivity between the transportation modes in the interests of providing an efficient and pleasant alternative to using the automobile for all trips.

Parks and Recreation Element

Parks of all types are considered important destinations in themselves when planning bikeway systems, and open space type parks may be large enough to provide viable routes within themselves. In addition, bikeways linking parks are considered a desirable element, particularly for recreational cyclists.

Page 7-13: Parks and Recreation Element Chapter 6 - Policies and Guidelines

6.3 Community Parks

Guidelines

"2. Create a system of trails, bicycleways and pedestrian oriented corridors that link together community parks."

This reflects the goals and objectives of many of the previous excerpts from other *General Plan* elements in its intention to make bicycle travel a more enjoyable recreational activity.

2.2 City of Chula Vista Bikeway Master Plan (1996)

As is customary for a plan update, the current *City of Chula Vista Bikeway Master Plan* (dated August 1996) was thoroughly reviewed for both content that should remain and changes that should be considered for the update. For example, a significant portion of the 1996 document is a synopsis of the previous edition of Chapter 1000 of the *Caltrans Highway Design Manual: Bikeway Planning and Design*. Some provisions changed with the newest edition (1996) making some of the document obsolete.

Chapter 5 of the 1996 *Bikeway Master Plan, Bikeway Plan Implementation* was also particularly closely reviewed and the near-term recommendations compared to existing conditions.

Page 36: Chapter 5 - Bikeway Plan Implementation
Near Term Bikeway Implementation Priorities
Since these locations were singled out in the 1996 master plan as implementation priorities, they were field checked to determine existing conditions.

Orange Avenue:
• Between Palomar Street and Hilltop Drive: No bicycle facilities

East H Street:
• Between Buena Vista Way and Otay Lakes Road: No bicycle facilities

Telegraph Canyon Road:
• Between Nacion Avenue (under I-805) and Halecrest Drive: No bicycle facilities

Otay Lakes Road:
• Between Ridgeback Drive and East H Street (east side only): Class 2 and 3 facilities
• Between East H Street and Apache Drive: Class 2 and 3 facilities

Except for Otay Lakes Road, bicycle facilities have not been installed in these locations.

2.3 Specific Plan Areas

Consultant staff met with City planning staff and conferred with San Diego Unified Port District staff to review and collect information on major new projects within the City of Chula Vista. Planning documents included the following:

EastLake I GDP - SPA Plan
EastLake II GDP – Greens SPA
EastLake III Olympic Training Center SPAP
EastLake Business Center II SPA GDP - SPA Plan
EastLake Trails GDP SPA Plan
Otay Ranch SPA One
Otay Ranch Village Eleven
Salt Creek Ranch GDP – SPA Plan
San Miguel Ranch – SPA Plan
Sunbow GDP – SPA Plan
San Diego Unified Port District Port Master Plan - Planning District 7, Chula Vista Bayfront Precise Plan

Project maps were scanned from these documents and proposed bikeway facilities digitized into a new GIS coverage layer of the proposed bikeway facilities. (See Chapter 9, Recommendations.)

2.4 State and Regional Bikeway Standards

Both state and federal law require transportation planners to accommodate travel by bicycle in the transportation infrastructure. Caltrans is the state agency tasked with administering bikeway funding throughout the state of California via the Bicycle Transporta-

tion Account (BTA). For a city to be eligible for state BTA funds to implement the elements of its bikeway master plan, Caltrans requires the plan to conform with an applicable Regional Transportation Plan (RTP) and to fulfill a specific set of requirements listed in the *California Streets and Highways Code,* Section 891.2. (See Executive Summary.)

2.4.1 Regional Transportation Plan (RTP)
The RTP is a set of policies, plans and programs to guide the effective coordination and orderly programming of transportation improvements among local, state and federal agencies. It was developed through a continuing, comprehensive and cooperative planning process. The document contains major transportation issues, goals, objectives, policies and specific actions.

SANDAG is the regional agency mandated to prepare and to periodically update the RTP by Section 65080 of the State Government Code. This code section also specifies that actions by transportation agencies, including Caltrans and transit development boards, must be consistent with the RTP. Land use decisions also should consider the RTP, accommodating the facilities and programs specified in the plan wherever possible. The facilities contained in the RTP should be incorporated into the local General Plans of the land use agencies within the region. Most local transportation projects must be consistent with the RTP in order to obtain federal, state or local transportation sales tax funding.

The RTP stresses construction of bikeway facilities with an emphasis on major regional bikeways and increased usage of these facilities in improving bicycling as an effective transportation alternative. Objectives of the plan include an increase in bicycle use for short home-based trips, the continued construction of bikeways and the provision of secure bicycle storage at employment sites, transit stations and park-and-ride facilities.

The primary objectives of the RTP are to encourage an increase in bicycle travel and the expansion of the existing 965 mile system of bicycle paths, lanes and routes by a minimum of 30 miles per year over the next 20 years.

RTP Bicycle and Pedestrian Policies
The RTP has been updated, but the following policy sections remain valid. The RTP combines bicycles and pedestrians in one chapter so the following policies routinely consider both:

1. Bicycling and walking should be considered an equal, coordinated and integral component of a comprehensive transportation system.

2. The needs of bicyclists and pedestrians should be considered at the inception of all public and private development and infrastructure projects and should be addressed as part of the total design solution.

3. Bicycle and pedestrian facilities should emphasize:

a. Providing bicycle and pedestrian routes in areas where there are the largest number of prospective users;

b. Completion of gaps in the continuity of pedestrian and bicycle facilities;

c. Integration into the existing multi-modal transportation network;

d. Proper maintenance of facilities;

e. Providing programs that encourage safe use of facilities; and

f. All facilities should be constructed in accordance with the requirements of the Americans with Disabilities Act (ADA).

2. Bicycle and pedestrian facilities should be coordinated with transit activities to provide:

a. Safe and convenient access to transit terminals;

b. Secure bicycle storage at existing and proposed terminals, park-and-ride lots, employment sites, commercial areas and recreational facilities;

c. Where feasible, expanded bicycle storage facilities that include amenities such as changing facilities, bicycle rentals and repairs;

d. Maximum use of bus bike racks through effective marketing and publicity;

e. Maintenance and improvement of facilities on light rail and commuter rail systems to allow for transportation of bicycles;

f. Enhancement of bicycle facilities within rail rights-of-way; and

g. Accessible routes to rail transit stations, transit centers and bus stops.

3. Implementation of the bicycle and pedestrian system should be accomplished in a way to maximize the positive impact the system will have on air quality and energy conservation, including:

a. An educational and promotional program to encourage people to change from automobile to bicycle travel;

b. A program of reducing on-street parking where appropriate to provide cyclists with safer routes;

c. An adequate funding program for facilities and programs; and

d. Public and private employer subsidization of non-auto travel (i.e., bicycle and pedestrian) in such cases where auto travel is being subsidized.

4. Bicycle and pedestrian facilities should be provided according to the following priorities:

a. Elimination of problem areas on routes which would otherwise provide relatively safe travel use;

b. Service to high use activity centers (economic, educational, cultural, recreational), including access to transportation services such as transit centers and park-and-ride facilities;

c. Connection to and continuation of longer routes to improve regional continuity.

5. Safe, convenient and continuous pedestrian and bicycle access should be ensured in the construction or reconstruction of all transportation facilities, and in other construction projects that impact bikeways.

RTP Bicycling Actions

1. Bikeway improvements to be funded through federal, state and local programs will be taken from the adopted long-range plan and local bicycle transportation plans.

2. SANDAG, in cooperation with the affected local agencies participating on the Bayshore Bikeway Policy Committee, will continue to develop enhancements to the Bayshore Bikeway. Once an alignment is determined, local agencies will contract for completion of specific projects.

3. Local agencies will complete the bicycle projects as scheduled in the Regional Transportation Improvement Program.

4. MTDB will consider eliminating the requirement that bicyclists must have a permit to bring their bicycles on the San Diego Trolley. (This requirement was recently eliminated.)

5. SANDAG, with the help of local agencies, will continue a program to monitor achievement toward bicycle objectives as set in the RTP.

6. Caltrans, the cities and the County will construct approximately 30 miles of new bikeways a year; and local agencies will require bikeways designated on community and general plans in and adjacent to new development to be built as a condition of development.

7. The County and the cities of the region will require bicycle parking in new development, and in major reconstruction projects and, in cooperation with SANDAG, will develop regional bicycle parking standards.

8. RideLink, the cities and the County will continue the government-supported regional bicycle locker program.

9. RideLink will continue to distribute regional bike maps.

10. Local agencies will install bicycle sensitive loop detectors to actuate traffic signals at signalized intersections. Existing loop detectors will be tuned to detect bicycles wherever possible.

11. Affected cities and the County of San Diego, with the cooperation of NCTD and MTDB, will complete design and construction of the Coastal Rail Trail and the Oceanside-Escondido Rail Trail.

12. Plans for alternate modes of transportation between San Diego and Coronado across San Diego Bay will include bicycles as an integral part of any plan implemented.

13. The Port of San Diego and other single-purpose agencies will continue to accommodate the needs of cyclists when developing facilities.

14. Cities and the County will keep bicycle and pedestrian facilities in good repair and be responsive to citizen suggestions for improvement of existing bike routes and pedestrian facilities.

15. SANDAG will maximize funding available to local agencies for the bicycle program; sources will include Transportation Development Act, TransNet and others as available.

16. Local agencies will seek funding from all available sources for this program, including the State Bicycle Transportation Account and others.

17. The SANDAG Board of Directors will review projects selected by the Bicycle Pedestrian Advisory Council annually for Transportation Development Act and TransNet funding according to the criteria approved by the Board.

18. The Regional Standard Drawings Committee of the San Diego region will adopt standards that ensure safe passage of bicyclists through construction areas.

The following sections are taken from the updated RTP, MOBILITY 2030.

Improving Non-Motorized Alternatives

Bicycling and walking are quintessentially local modes of transportation, but both can play a part in the region's transportation network. Nearly 40 percent of all home-to-work trips could be made in about 30 minutes by bicycle, and 40 percent of home-based trips not associated with work are within ten minutes by bike.

Virtually every trip begins and ends with a walk, and access to transit is an especially important role for walking, but walking can be a viable means of travel in and of itself. A short trip to the library, post office or ball

field can easily be made on foot where the transportation network serves the needs of pedestrians. These short trips, when made by auto, are among the most inefficient in terms of air quality and fuel efficiency.

Making cycling and walking more attractive means of travel is not difficult from an engineering point of view. However, walking and cycling does require changes in the way we use land, build our transportation infrastructure, and maintain our public rights of way. It also requires education and marketing that encourages people to expand the way they think about their transportation choices.

Making the region's transportation network more accessible will require an expanded financial commitment to bicycling and walking infrastructure. Some improvements can be accomplished relatively easily when new streets are built or old ones are reconstructed. However, some parts of the region's transportation network will need to be retrofitted without the benefit of a major reconstruction. Financing these improvements is one of the challenges that the region faces.

Accommodating Bicycling and Walking

People traveling on foot or by bicycle have the same needs as motorists. They want safe and convenient ways to travel, and they need access to most all of the same destinations as motorists. To meet this need, the region's transportation system should be designed and built to accommodate bicyclists and pedestrians. This notion has been established by both federal and state policy. The 1999 federal guidance regarding the bicycle and pedestrian provisions in TEA-21 makes clear that accommodating bicycle and pedestrian travel should be a routine part of the planning, designing, construction, and operation of every federally funded transportation project. Likewise, Deputy Directive 64 commits Caltrans to "fully consider the needs of non-motorized travelers in every aspect of its work." Local and regional agencies need to take the same approach when developing transportation improvements.

Most bicycle and walking trips are relatively short and within a single community. While these community trips may be focused on a neighborhood commercial district, school, or other community service like public transit, the trip origins are widely dispersed. Because of this, the transportation network must accommodate bicycle and pedestrian travel. Transportation facilities should be designed to encourage bicycle and walking trips, and not be a barrier to those trips. Whether a freeway interchange, local arterial, or residential street, the needs of bicyclists and pedestrians should be included in the program from the start and thus, the cost of providing that access can be minimized, especially when compared to the cost of retrofitting an existing facility.

Making Bicycle and Pedestrian Friendly Communities

The region's transportation system needs to provide a full range of transportation choices in a balanced and integrated manner. Sidewalks and streets do not accomplish this alone. A complementary relationship must exist between the transportation system and land uses it serves.

SANDAG recently took a significant step toward establishing more walkable communities when it adopted Planning and Designing for Pedestrians, Model Guidelines for the San Diego Region (June 2002). This document provides guidance on a wide range of factors affecting walkability such as:

• Providing a mix of land uses within communities that makes more destinations accessible on foot

• Building interconnected street networks that provide more direct access

• Designing streets that connect a community rather than divide it

• Street crossing designs and traffic calming measures that create a more pedestrian-friendly street environment while minimizing the impact to traffic flow

• Streetscapes designed to a pedestrian scale, and site layouts that encourage pedestrian access

• Sidewalk design that provides space for the variety of functions the sidewalk must perform

Ideally, this type of development should be focused along transit corridors and around transit hubs.

SANDAG will assist member agencies in developing policies that facilitate implementation of these developments. In addition, regional transportation funding decisions will be influenced by how well the transportation projects and related land uses accommodate cycling and walking.

Access to Public Transit

The principles in Planning and Designing for Pedestrians support the region's goals for improving access to public transit. Mixed land use and network connectivity make it easier for public transit to efficiently take people where they want to go. Well-designed sidewalks and crosswalks make walking to and from transit more attractive. The guidelines show how to do this, and how to incorporate transit stops into pedestrian walkways so there will be room for both.

Bicycle Facilities and Access

Communities that support walking as a means of access usually are bicycle-friendly communities as well. The mix of land uses bring more destinations into easy bicycling range where the bicycle can fill the gap between destinations that can be reached on foot and those that would require a transit or auto trip. Calming traffic on pedestrian-oriented streets usually makes them more attractive places to ride a bike.

Beyond these improvements, bicycle access is improved where the road network provides space for bicyclists and road surfaces are well maintained. Where the street network cannot adequately serve bicyclists, separate bike paths should be built. These bike paths or trails also can provide access for pedestrians. Also important are adequate bike parking and other support facilities and ongoing education and promotional programs.

Bicycle Parking

Bicycle theft is one of the deterrents to bicycle travel, but it can be overcome by providing quality bicycle parking facilities. Fortunately, good bicycle parking can be provided at a very modest cost. In contrast, poor quality bike parking is often underutilized because it is either inconvenient, does not effectively secure the bike, or both. For bicycle commuting trips, employers should be encouraged to provide bike lockers or other high security parking.

On-Demand Bike Lockers

On-demand bicycle lockers allow bicycle commuters to use any locker at a given site on a first-come, first-serve basis. Such lockers are being pilot tested for consideration for new and replacement installations of the region's existing bicycle lockers. These state-of-the-art lockers use electronic keys, allow multiple users the opportunity to use the same locker, and have the ability to provide information about utilization and demand. The potential benefits of the on-demand lockers include reduced program administration costs, reduced inappropriate usage of the lockers, and increased utilization. In addition, the total number of lockers required at any given site may be reduced as the number of lockers required only needs to meet the peak de-

mand. Currently a locker is provided for every registered user, regardless of how often that person uses it. Upon successful completion of the pilot program, the entire system could be converted as old lockers reach the end of their useful life.

Support Facilities
Support facilities such as clothing lockers and showers greatly enhance the experience of bicycling to and from the workplace and also serve to encourage employees to consider bicycling as a viable commute choice. Where employment density warrants, local agencies should consider policies that encourage building owners and employers to provide clothing lockers and showers for their employees to accommodate longer bike trips.

Bicycle Education
The most frequently cited reason for not riding a bicycle is concern for personal safety. This is understandable since bicyclists are very vulnerable in collisions with motor vehicles. However, education on proper bicycle riding can significantly improve the bicyclist's safety, which in turn can help to overcome some of this resistance. Since there is no region-wide bicycle safety education program, efforts should be made to make bicycle safety information available to both adults and children.

Bicycle education for children should be provided through the schools. Instituting an ongoing program in the schools will likely require development of a teacher training program. Effective programs that can serve as a model have been instituted in Texas and Nevada. Opportunities also may exist to distribute bicycle safety materials to adults in conjunction with campaigns that promote alternatives to driving alone, but a program will have to be developed and funding sources will have to be identified for such an effort. To further encourage both bicycling and walking, the Plan also recommends continued support for RideLink's annual Bike to Work Day and support for events like the annual Walk Your Child to School Day.

Bicycle and Pedestrian Program Funding
Financing bicycle and pedestrian projects, and providing incentives for community designs that support these modes, is one of the challenges facing the region. Often, no separate funding for these improvements is required when bicycle and pedestrian infrastructure improvements are included as part of a larger transportation project.

However, there are many communities in the region that would benefit from improved bicycle and pedestrian facilities that do not anticipate new construction or major redevelopment. Financing improvements in these areas is often difficult. The annual revenues from the Transportation Development Act for bicycle and pedestrian projects (currently about $2.5 million), and the $1 million in annual TransNet funds set aside for bicycle projects, provide less than half the funds requested in each annual funding cycle.

No accurate estimates exist for needed pedestrian infrastructure improvements, but based on existing bicycle transportation plans and additional estimates provided by local jurisdictions, current bicycle project needs for the region are at least $200 million. Additional funding will be required to support a significant near term effort to implement the non-motorized component of the Plan. MOBILITY 2030 fills some of this funding gap by doubling annual bike and pedestrian funding levels.

Bikeway Projects
According to SANDAG, among the RTP bikeway projects being planned or scheduled for completion are several within or very near the City of Chula Vista:

Bayshore Bikeway
The San Diego Bayshore Bikeway is a 26-mile bikeway around San Diego Bay. Cosponsors of the project are the Cities of San Diego, National City, Chula Vista, Imperial Beach and Coronado, and the County of San Diego. Project improvements are being developed through SANDAG's Bayshore Bikeway Advisory Committee. The bikeway is largely in place along the western and southern sides of the bay. The extension of the path along the eastern side of the bay with a bridge across the Sweetwater River was recently completed. The next scheduled construction project is an extension of the path between Imperial Beach and Chula Vista. That project will substantially complete the Bayshore Bikeway.

Sweetwater River/Otay River Loop
The Sweetwater River/Otay River loop will someday connect two corridors in the South Bay area. The City of Chula Vista Bikeway Master Plan (1996) incorporated this loop by including a greenbelt around the City utilizing the Sweetwater and Otay River valleys, connecting at the Otay Lakes area. The City of National City bikeway plan also includes the Sweetwater River Bike Path and the County of San Diego has identified the Sweetwater River Valley as a potential trail alignment from the Bayshore Bikeway to the Sweetwater Reservoir. Joint planning by these three jurisdictions to extend the Sweetwater River Trail is ongoing.

SR-905 Corridor
While not directly related to the City of Chula Vista, according to the RTP the "SR-905 corridor provides access from Chula Vista to the two international border crossings along Beyer Boulevard and the SR-905 alignment." The southern portions of the Sweetwater River/Otay River loop/City of Chula Vista Greenbelt Bikeway system are likely to receive far more use.

SR-94/SR-54 Corridor
The SR-94/SR-54 corridor will connect the east county communities of Spring Valley, Rancho San Diego and El Cajon. No corridor improvements have been developed to date, but the corridor will become more significant to the City of Chula Vista's bikeway system connections because the SR-54 portion of the corridor will someday connect to the Sweetwater River Bikeway whose expansion eastward toward the SR-54 corridor is currently being planned.

It is SANDAG policy that new highway facilities developed with TransNet revenue include provisions for bicycle use. The TransNet Transportation Improvement Program Ordinance and Expenditure Plan states, "All new highway projects funded with revenues as provided in this measure, which also are identified as bikeway facilities in the Regional Transportation Plan, shall be required to include provisions for bicycle use."

Though a number of TransNet funded highway projects are identified as being part of the Regional Bikeway System in the RTP, only one lies near the City of Chula Vista. This is SR-54 from Interstate 805 to SR-125, but there is specific no recommendation at this time because "…proposed alternative routes are adequate." This probably refers to the Sweetwater River Bikeway that runs primarily through neighboring National City.

Similar consideration for bikeway facilities should also be given to the section of SR-125 that will run through Chula Vista between SR-905 and SR-54 as the highway construction makes its way southward. Any disruptions in bicycle access caused by highway development should be mitigated via parallel surface street Class 2 facilities or possibly within the highway right-of-way itself that could provide space for parallel Class 1 facilities where

needed. Caltrans plans call for allowing bicycle use on the shoulders of SR-125. Major area streets that will have Class 2 bike lanes include Rock Mountain Road, Heritage Road, La Media Road, Hunte Parkway and Birch Road, but their final alignments have not yet been determined.

2.4.2 California Streets and Highways Code, Section 891.2

This code section defines the standard requirements for acceptable bikeway master plans for the state of California. The text reads as follows:

A city or county may prepare a bicycle transportation plan, which shall include, but not be limited to, the following e elements:

(a) The established number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.

(b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings and major employment centers.

(c) A map and description of existing and proposed bikeways.

(d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings and major employment centers.

(e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles of ferry vessels.

(f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom and shower facilities near bicycle parking facilities.

(g) A description of bicycle safety and education programs conducted in the area included in the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.

(h) A description of the extent of citizen and community involvement in development of the plan including, but not be limited to, letters of support.

(i) A description of how the bicycle transportation plan has been coordinated and is consistent with the local or regional transportation, air quality or energy conservation plans, including, but not be limited to, programs that provide incentives for bicycle commuting.

(j) A description of the projects proposed in the plan and a listing of their priorities of implementation.

(k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.

To facilitate Caltrans review, the location within this document of each requirement is listed in the Executive Summary.

Caltrans Highway Design Manual Chapter 1000, Bikeway Planning and Design
This is the primary standard for bikeway development and design for all bikeway projects throughout the state of California. Since Caltrans administers federal bikeway funding within California, any project using federal funds must abide by the standards and regulations in the manual, irrespective of whether the bikeway lies within a state highway right-of-way. The overall standards have remained fairly stable, but there were a few changes in the latest revision. Primarily, dimensions are now in metric format and bikeway widths were increased. For example, Class 2 routes adjacent to curbs now must be five feet wide, but this dimension must be increased another foot when the route is adjacent to parking.

Caltrans Project Development Procedures Manual (PDPM) Chapter 31 – Non-Motorized Transportation Facilities
This document defines how state and federal laws require Caltrans to promote and facilitate increased use of non-motorized transportation. This chapter of the PDPM provides detailed procedures for implementing bikeways as part of state highway projects. The specific purpose of this chapter is to "outline pertinent statutory requirements, planning policies and implementing procedures regarding non-motorized transportation facilities."

Caltrans Deputy Directive 64
A recent Caltrans directive to division directors indicates that Caltrans is demonstrating timely concern for bicycle transportation. The directive designates bicycles and bicycle facilities as priorities in traffic planning and declares that: "The Department fully considers the needs of non-motorized travelers (including pedestrians, bicyclists, and persons with disabilities) in all programming, planning, maintenance, construction, operations and project development activities and products. This includes incorporation of the best available standards in all of the Department's practices. The Department adopts the best practice concepts in the US DOT Policy Statement on Integrating Bicycling and Walking into Transportation Infrastructure." The full text of the directive can be found in Appendix A, Agency Publications.

Assembly Concurrent Resolution 211
On May 16, 2002 (the official California Bike-to-Work Day), Assembly Member Joe Nation (D-San Rafael) introduced Assembly Concurrent Resolution Number 211, relative to integrating walking and biking into transportation infrastructure. This advisory measure encourages all cities and counties to implement the policies of the California Department of Transportation Deputy Directive 64 and the United States Department of Transportation's design guidance document on integrating bicycling and walking when building their transportation infrastructure. The full texts of the resolution and the Department of Transportation's design guidance can be found in Appendix A, Agency Publications.

2.5 Surrounding Communities

Evaluating the existing and planned bicycle facilities of adjoining jurisdictions that have the potential for linkage between communities is a standard component of bikeway master plans. The City of Chula Vista is bounded by the cities of San Diego and National City and by unincorporated sections of the County of San Diego. In addition, the tidelands of San Diego Bay are under the jurisdiction of the San Diego Unified Port District. (See Figure 1-1, Project Location.)

Each of these jurisdictions has its own bikeway planning efforts at different levels of detail and stages of implementation. As part of the planning process, contact was made with all the surrounding jurisdictions to ensure the development of concepts and alignments that would be compatible with those of the

surrounding areas. A summary of the issues regarding each community potential linkages with Chula Vista is presented below. The City should maintain periodic contact with surrounding jurisdictions to ensure that the linkages necessary to achieve a regionally connecting bikeway system are accomplished.

In general, regional geomorphology limits bikeway connections between Chula Vista and the neighboring cities to the north and south. The Sweetwater River and its valley create a physical barrier along the City's northern boundary with San Diego and National City. To the south, the Otay River and adjacent steep slopes of Otay Mesa also create a barrier.

To the east, bikeway facilities connecting with unincorporated and relatively undeveloped portions of the County are more feasible.

Only to the west is there a corridor relatively unimpeded by topography, where the coastal plain provides a relatively level connection between Chula Vista and both of its municipal neighbors. However, even here, there are other impediments like wetlands, river mouths and encroaching bayfront development. Most of the regional bikeway projects are within this coastal zone and are shared by Chula Vista and at least one neighboring community. Therefore, the shared coastal bikeway facilities are described in Section 2.6, Regional Bikeway Projects, and the surrounding communities' potentially connecting bikeways east of the San Diego Bay area are described in the following sections.

2.5.1 San Diego

Chula Vista's southern city limit is shared by the City of San Diego from San Diego Bay to just east of Otay Valley Road. The city limit line roughly follows the Otay River, though the actual line traverses sections of the Otay Valley Regional Park that includes the steep slopes on the north side of Otay Mesa.

There are four bikeway connections between the cities of San Diego and Chula Vista, all within the western half of Chula Vista from San Diego Bay to near I-805. The westernmost connection is the Class 1 portion of the Bayshore Bikeway running north/south between Main Street in Chula Vista and Saturn Avenue in San Diego. (This segment is scheduled for completion in early 2005.) Broadway changes from a suggested route to Class 2 Beyer Boulevard in San Diego as it crosses the Otay River. Beyer Way is a Class 3 route that changes to a Class 2 in San Diego south of the river.

The fourth connection is I-805 which is designated as a suggested route between Palm Avenue in San Diego and Auto Park Way (formerly Otay Valley Road) in Chula Vista. Of the more than 4,000 miles of freeways in California, about 1,000 miles are open to bicyclists. Though not common in urban areas, freeways can be legal bicycle routes where there are no nearby alternative routes. In this case, the Otay River creates a barrier and the next closest north-south route is Beyer Way, which is more than a mile to the east.

2.5.2 National City

Chula Vista's northern boundary from San Diego Bay inland to I-805 is formed by the City of National City, but the cities are physically separated by the Sweetwater River and SR-54. National City's bikeway connections with Chula Vista are limited to four bridges over the Sweetwater River at National City Boulevard/ Broadway, Highland Avenue/Fourth Avenue, Second Avenue, and the Bayshore Bikeway bridge just west of Interstate 5. These routes are all Class 3 except for the bridge portion of the Second Avenue crossing, which is designated a suggested route, and the Bayshore Bikeway bridge, which is a Class 1 facility.

2.5.3 San Diego Unified Port District

The Port District is currently developing a Port Master Plan, the Chula Vista Bayfront

Precise Plan. The Port District is dedicated to integrating bikeways into the existing transportation network by providing bikeway connections from the bayfront to other areas of the City. However, existing and proposed bikeways on the bayfront and Port tidelands may be relocated as a result of the ongoing Chula Vista Bayfront master planning process. Due to the likely continued popularity of the bayfront as a cycling destination, the City and Port should maintain close contact as planning progresses.

2.5.3 County of San Diego

The majority of Chula Vista's city limits are contiguous with unincorporated County land, especially its northeastern and eastern boundaries. Proctor Valley Road and Otay Lakes Road will continue into unincorporated County land as designated RTP regional bikeways. La Media Road may continue southward and connect across the Otay River. Corral Canyon Road runs northward into the Sunnyside neighborhood of the County and is also Class 2. Bonita Road runs roughly east/west through western Chula Vista, San Diego and the unincorporated County neighborhood of Bonita, connecting to Sweetwater Road which then connects with the SR-54 corridor.

Willow Street crosses the Sweetwater River between I-805 and Otay Lakes Road via a narrow aging bridge connecting Chula Vista with the County neighborhood of Bonita. Willow Street connects with Sweetwater Road.

2.6 Regional Bikeway Projects

Consultant staff reviewed the status of regional projects including the Bayshore Bikeway and the City of Chula Vista Greenbelt Bikeway project. Both of these projects can provide connections to adjacent communities and beyond, benefiting commuting and recreational cyclists alike. The following are detailed descriptions of their current status.

Bayshore Bikeway

The Bayshore Bikeway is a 26-mile bikeway facility around San Diego Bay. Planning for the Bikeway began in 1975 with a feasibility study conducted by California Department of Transportation (Caltrans) that envisioned a combination of Class 1 bicycle paths, Class 2 bike lanes and Class 3 bike routes providing convenient and scenic bicycle transportation around the bay.

In 1976, National City received a Transportation Development Act (TDA) allocation from SANDAG to widen the Chollas Creek Bridge on Harbor Drive, the first project on the route. The following year, the County of San Diego and the cities of Coronado, Imperial Beach, Chula Vista, National City and San Diego formed the Bay Route Bikeway Steering Committee. As a result of their efforts, the state legislature passed SB 283, providing approximately $1 million for construction of the Bikeway. By 1983, nearly $1.5 million in local TDA and state funds had been expended to construct portions of the Bikeway on old railroad right-of-way along the Silver Strand in Coronado and on Harbor Drive in the City of San Diego.

The first connection between Coronado and San Diego was via bike racks attached to transit buses. In 1987, service on the San Diego-Coronado Ferry became available. The next major improvement came when the San Diego Port District constructed a bicycle path from Glorietta Boulevard, under the Coronado Bay Bridge to Tidelands Park in Coronado. The Port District extended this path north to the Coronado Ferry Landing in 1993.

In 1989, SANDAG established the Bayshore Bikeway Policy Advisory Committee to promote improvements to the Bikeway. The Committee consists of an elected official from the County of San Diego and each of the five cities around the Bay. The Committee also

includes participation by representatives from affected public agencies such as the San Diego Unified Port District and the Metropolitan Transit Development Board (MTDB), the bicycling community, and other interested members of the public.

A number of projects have been completed as a result of the committee's efforts. In 1993, the Port District extended the Tidelands Park path section to the ferry landing. In January 1997, the City of Imperial Beach extended the Silver Strand section of bike path eastward along the bayfront from 7th Street east to 13th Street. This 1.2-mile project was constructed primarily within the old Coronado Branch of the San Diego & Arizona Eastern railroad right-of-way and will eventually be part of a bayfront linear park. The project was funded by SANDAG with TransNet bicycle funds. Most recently, Caltrans completed a connection between the bikeway at Pepper Park in National City and the Sweetwater River Bikeway. This path section passes under I-5 and the San Diego Trolley line at SR-54, allowing cyclists to ride east to Plaza Bonita.

Currently, approximately 13 miles of Class 1 bicycle paths are in use on the Bikeway. The rest of the facility consists of on-street sections designated as either Class 2 bicycle lanes or Class 3 bicycle routes. The original bikeway plan identified interim facilities on local streets for portions of the route. One of these "interim" facilities still in place near Chula Vista is at the south end of the Bay between Imperial Beach and Chula Vista. Completing the interim routings has been the primary focus of the Bayshore Bikeway Committee.

Sweetwater River Crossing

This project provides a much-improved crossing of the Sweetwater River between Chula Vista and National City and eliminated a section of the route where cyclists had to travel east from the bayfront to cross the river on National City Boulevard/Broadway. The former routing required travel on several busy streets that did not adequately accommodate bicycles. The new alignment brings the route back to San Diego Bay within a right-of-way reserved for bicycles and pedestrians and reduced travel distance by more than two miles. The project was divided into two phases. Phase I was the extension of the Sweetwater River bike path along the levee to Pepper Park and Tidelands Avenue, completed in the Spring of 1999. Phase II was the bridge that crossed the river and connected to Bay Boulevard at E Street in Chula Vista in 2003.

South Bay

This section is just to the south of Chula Vista. The next major project in the South Bay will be to replace the current routing along Palm Avenue in the City of San Diego. Preliminary design and environmental studies are underway for an alignment that will extend the path at 13th Street in Imperial Beach to Bay Boulevard in Chula Vista using a combination of MTDB railroad right-of-way and adjacent berms that are part of the salt extraction operation. From the point of view of the commuting bicyclist, this is an optimum alignment because it the most direct route between Imperial Beach and Chula Vista. It is also scenic enough to appeal to recreational cyclists. The City of San Diego is the lead agency for this section and is responsible for the environmental documentation and final design. Right-of-way agreements with the Port District, the State Lands Commission and MTDB have been negotiated, and final design and construction is planned to commence following disposition of historically designated railroad infrastructure within the right-of-way (tracks).

Harbor Drive Improvements
This project falls outside the City of Chula Vista and within the cities of San Diego and National City, but this Bayshore Bikeway segment is integral to completing the regional connections that would benefit all area cyclists by linking the coastal cities around San Diego Bay.

The current Bayshore Bikeway north of National City consists almost exclusively of bike lanes on Harbor Drive. The 32nd Street Naval Station and a variety of bayfront industries prevent construction of a bicycle path along the waterfront. The east side of Harbor Drive is primarily railroad right-of-way used by freight and light rail. Bike lanes can be effective bicycle commuting facilities, but these bike lanes are adversely affected by a number of at-grade railroad crossings, deteriorating pavement and encroachments from parked cars. The City of San Diego has conducted a corridor improvement study from National City to downtown San Diego. The study inventoried needed maintenance and capital improvements to the bike lanes that the City of San Diego will be addressing through its street maintenance and capital improvement program.

Sweetwater River Bikeway
This bikeway runs parallel on its north side of the Sweetwater River from just west of Interstate 5 and crosses to the south side before terminating at the Plaza Bonita Mall. The bikeway runs through several jurisdictions, including the cities of National City, Chula Vista and San Diego, as well as the County of San Diego. Plans are being made to extend the bikeway eastward to Sweetwater Reservoir. Preliminary analysis and alignment studies of the western portion of the extension are ongoing, but no construction schedule has been set.

City of Chula Vista Greenbelt Bikeway
A regional greenbelt study is the subject of a separate planning effort by the City of Chula Vista and the County of San Diego. For the purposes of this master plan update, appropriate consideration will be given to likely connections between the City of Chula Vista's bikeway system and the greenbelt corridors as suggested in the current bikeway master plan, as well as any other more up-to-date information that becomes available through the course of this study. A greenbelt bikeway system would provide a comprehensive and appealing route ringing the City as well as connections to adjacent communities and other bikeway and trail systems.